Matt Nelson
Modern History Workshop 10/3/14

I first would like to thank everybody for taking time out of their schedules to take a look at this draft of my chapter. While still early in the semester, I know how busy our schedules can get even within a few weeks.

Today's paper is the beginnings of the occupational research. I'm particularly looking at how occupations were collected in the Census, the biases in said collection, and how future historians might reconsider adjusting their measurements of farm workers. At its early stages, my writing is not very well focused (especially the beginning historiography portion) and I'll be focusing this more in the coming weeks. The paper is fairly disjointed at this point both for the textual analysis (I spend some time looking at the enumeration instructions but none yet on the exact occupations and categorization used in the Census) and the quantitative analysis (I present some preliminary measures and models, but the models in particularly are very rough and I have not gone through the phase of diagnosing biases in the model). Because this is one of the first drafts of this particular work, there is still much more to be written/researched. The most glaring example of this is the difference in agricultural context by region. The U.S. South utilized slave labor which rearranges the household power structure and relationships. Later on, sharecropping evolves, which is very different than the rise in tenancy is in the Midwest.

For now, I have included a few footnotes on areas that I skim over with the impression of doing more reading/research into those particular issues. Nonetheless, I am confident that this preliminary work will serve as a great jumping off point, and I look forward to your feedback on how to improve both sets of analyses that I'm presenting today. Below is a preliminary layout for my dissertation. I am using "Chapters" pretty fluidly at this point, and it is likely that these sections will be broken up into multiple chapters (particularly today's paper into a textual analysis of the Census and a quantitative analysis of the Census).

Introduction

I cover the historiography of American agriculture regarding family labor as well as the work done on kinship, family living arrangements, and the data that I will be using. I also spend a brief portion of this chapter defining what I mean by a family farm. I am referring to a similar definition used by A.V. Chayanov in the 1920s regarding peasant farms in Russia during the early twentieth-century, which is that the labor force of the farm is driven by family members.[1] Where I diverge from Chayanov is that I allow for neighborhood exchange and hired labor, although the emphasis is on family ownership rather than corporate ventures such as the bonanza farms of the 1890s. At this point, I am including slave labor from the antebellum period in the context of family farms, although I need to do more research on how slavery precisely fit into this definition. While most farms that utilized slave labor were relatively small, the *Gone with the Wind* large plantations are still being included in this definition of "family farm." At this point, I have not researched/parsed out whether these farms should be included in my definition of a family farm.

Intergenerational Coresidence

[1] A.V. Chayanov. *The Theory of Peasant Economy.* Ed. Daniel Thorner, Basile Kerblay, R.E.F. Smith. American Economic Association. Homewood, Illinois. 1966. 53.

Using IPUMS-USA 1860-1930 1%-5% samples and the 100% data samples from 1850, 1880, and possibly 1940[2], I measure intergenerational coresidence[3] at the neighborhood level (Minor Civil Division or Enumeration District when available). I perform multi-level analysis of individual and neighborhood characteristics and am looking into performing longitudinal multi-level analysis at the Minor Civil Division/Enumeration District and/or county level (depending on how boundaries change over time).

The Return Should Be "None": Farm Occupations in the Census 1850-1940[4]

This chapter (the subject of today's workshop paper) focuses on how the U.S. Census collects occupation and some of the limitations with using occupation to measure the family labor of women and children. I provide traditional measures of occupations of farm families to show more specifically the distribution of family labor being skewed towards adult males. Using a variety of measures such as an lower age cutoffs, family life cycle assumptions, and inclusion of non-occupational household work (e.g. "Keeping House), I argue that women and children not only played a fundamental role in maintaining family farms, but were the primary source of labor for most farms. My argument is critical of the breadwinner household as a useful model for considering family farm labor based on the idea that evolution of household work becoming the sphere in which women and children worked at best represents an opportunity cost that allows for more efficiency in labor allocation and thus underestimates the contributions of women and children in allowing this transformation, and at worst underestimates the economic impact of household work and chores.

Improving the Big Woods: Andrew Peterson's Labor Network 1855-1898

Using the diaries of a farm family in Minnesota (and possibly elsewhere depending on the time/money constraints of data entry), I provide a measure of neighborhood exchange. While alluded to by several historians over the past 50 years, neighborhood exchange has never been directly measured, meaning we have no idea precisely how common or important these social and economic networks were. While it is universally accepted that these networks existed, many economic historians assume families slowly phased the labor networks out with the industrialization of agriculture or replaced them with more formal institutions such as farm cooperatives. Focusing on farm families in the nineteenth century, I aim to show that social networks were fundamental to farm families, especially ones in either a frontier situation or in a young life cycle situation. The primary drawback of this chapter is this diary is not representative of all farmers and ultimately fails to answer whether this is a life cycle issue, a frontier situation, or the local bonds of a religious community that is not representative beyond Andrew Peterson. While this chapter provides an important foundation and micro-level context for the dissertation,

[2] The 1940 100% has not been released yet, although a preliminary release will be available in October/November 2014.

[3] I define intergenerational coresidence using the definition proposed by Steven Ruggles. Intergenerational Coresidence is defined as adult children living with an elderly parent (age 60 or older). Steven Ruggles. "The Decline of Intergenerational Coresidence in the United States." *American Sociological Review*. 72. 2007. 964.

[4] I have not discussed the data I am using for this chapter because I will be discussing it in more detail in the intro or the chapter on intergenerational coresidence.

I transition in Chapter 4 to how we can use higher-level data to investigate the role of kinship and neighborhood exchange[5] beyond diaries and in a more representative fashion.

Labor Networks in the Census

The primary problem with big data sets is that they either tend to be full samples of county-level data, meaning very little can be measured in terms of neighbor effects, or are smaller samples of micro-level data, which can make it difficult to maintain the necessary precision at the neighborhood level. A partial solution to this problem is to utilize 100% samples of micro level data, which are currently being developed at MPC. Using 100% data samples from 1850, 1880, and possibly 1940, I plan on measuring ethnic and racial characteristics of the neighborhoods (at the Minor Civil Division or Enumeration District level when available) to try and measure social networks based on ethnicity and race. Alternatively, I plan on utilizing the surnames of individuals to try and provide a measure of kinship networks in micro areas to attempt to capture the effect of family continuation in nearby areas (measure this at the neighborhood and county level). Related to intergenerational coresidence, I plan on using a partial measure of generations in U.S. to try and capture how generational differences may interact with ethnic differences.

Conclusion

I will conclude my dissertation by discussing the industrialization of agriculture since the 1920s and how this has fundamentally changed how family farms operate. How we understand what a family farm is today compared to the past has significant differences, but also important similarities. The working relationships between individuals is very different (due to the increased education, financial security, decline of intergenerational coresidence, industrialization of agriculture, and increased government oversight concerning occupational safety to name a few), and narratives of the "ideal American family" as defined by Jeffersonian agricultural ideals should be challenged.

The Return Should Be "None": Occupational Classification on American Family Farms 1850-1940

[5] It is unlikely that much can be said of neighborhood exchange in the Census, but by using the 100% data, we can get a better measure of community characteristics that may prove useful for future research on the role of social networks.

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Throughout the nineteenth- and twentieth-centuries, family members provided the main labor force on farms. Due to how the Census defined occupations in the late nineteenth- and early twentieth-centuries, family farm labor was likely underreported in the Census, particularly for spouses. Using national level data for the United States from IPUMS-USA, I attempt to correct these figures using a life course perspective of work. I argue that in early family farm life cycles, spousal labor was far more common in farm fieldwork. Once children were born, child labor, particularly sons, substituted spousal labor in what has traditionally been defined as "farm work". While spousal farm and household work was usually defined by the cultural, economic, and ideological context of farm families and communities, the blurred lines of housework and farm work challenges the assertion that "domestic work", often performed by women, should not be considered while measuring farm labor. Using early pioneer accounts and time use studies from the 1920s, I attempt to distinguish housework and farm work to study intra household relationships and dynamics. Instead of focusing on separate spheres of work such as the household and the farm, I focus on task-orientation to explain the work patterns of farmers, spouses, and children.

In the "Report of the Country Life Commission" in 1909, L.H. Bailey and the rest of the Commission wrote "The most difficult rural labor problem is that of securing household help on the average farm. The larger the farm the more serious the problem becomes. The necessity of giving a suitable education to her children deprives the farm woman largely of home help."[6] Compulsory education, migration, declining fertility, cheap wage labor and industrialization of agricultural processes allowed farmers to rely less on family labor as the primary work force from which farm operations were derived. This did not happen in one moment, but was a transition that took several generations. Yet, even today, many people, both farmers and urbanites, romanticize the farmer as the "independent" man who relies not on the wage of capitalist employers, but on the sweat of his brow with the dependent women and children barely being mentioned.[7]

The yeoman farmer narrative of Jeffersonian idealism however is largely misplaced. Instead of the independent male farmer, the historical literature has placed women and children at the forefront of family economic production.[8] Yet, agricultural statistics on the distribution of farmers do not reflect this economic system, particularly for women. On the contrary, the United States Census reinforces the Jeffersonian vision of the yeoman farmer with the wife "Keeping House" while the children were "At Home." The diverging narratives reflect the different source materials of personal diaries, account books, and oral histories versus the statistical, nation-state

[6] L.H. Bailey, et al. *Report of the Country Life Commission*. Government Printing Office. 1909. 43.
[7] One example of this was a commercial from Super Bowl XLVII for Dodge Ram Trucks. In the commercial, several images of farmers (predominantly white male) are shown to the background of Paul Harvey's 1978 address "So God Made a Farmer" at a Future Farmer's of America convention. http://www.youtube.com/watch?v=nHjV-FPMm_I. Thomas Jefferson. *Notes on the State of Virginia.* 3rd Ed. 1781. 290-291.
[8] Jeanne Boydston. *Home and Work: Housework, Wages, and the Ideology of Labor in the Early Republic.* New York: Oxford University Press. 1990. x, xiv-xvii; Mary Neth. *Preserving the Family Farm: Women, Community, and the Foundations of Agribusiness in the Midwest, 1900-1940.* Baltimore: John Hopkins University Press. 1995. 2-3, 214-216; John Mack Faragher. "History from the Inside-Out: Writing the History of Women in Rural America." *American Quarterly*. 33:5. 1981. 545, 551. Nancy Grey Osterud. *Bonds of Community: The Lives of Farm Women in Nineteenth-Century New York*. Cornell University Press. 1991. Jane Marie Pederson. *Between Memory and Reality: Family and Community in Rural Wisconsin, 1870-1970*. University of Wisconsin Press, 1992. Rachel Rosenfeld. *Farm Women: Work, Farm, and Family in the United States*. University of North Carolina Press, 1985.

project of the United States Census. This chapter aims at describing how the Census collected occupation, what the Census statistics say about farm occupations for the nation as a whole, and methods to understand the narrative of women and children's work on farms in a national scope rather than a local community study. I argue that because of how the Census was enumerated, children, and especially women, were less likely to report an occupation. While not entirely surprising, by utilizing non-occupational responses and making assumptions about work using the age structure, immigration status, month of enumeration, and who the respondent for the Census was, newly revised figures better reflect the roles the literature argues that women and children played on farms during this period of transition from composite farms to industrialized, specialized farms.

In the United States, most family farms consisted of the nuclear family. While different kin lived close to one another in many areas, extended households were relatively rare. This implies that if kin groups were working together, the labor force came from around the household rather than within it. For this chapter, we are going to ignore this. The labor from the household varied both by region and the stage of the family life cycle. The largest difference that will be discussed later is the role of slavery. While most farmers did not own slaves, and large plantations comprised a small number of farms, slaves disrupted the farm-household labor balance. Indentured servitude, hired labor and servants could also serve to reinforce the household labor requirements. In most cases, family farms did not hire labor, often due to costs, and with smaller tracts of land, no need to hire labor.[9]

The debate regarding the rise of the breadwinner-homemaker household and its dominance in the United States until at least World War II deserves some attention, since the concern of this chapter is about describing the household labor distribution on farms. The

[9] Charles Post. *The American Road to Capitalism.* Chicago: Haymarket Books. 2011. 40-41.

feminist argument for the rise of the breadwinner-homemaker household is the feminist argument that household work was slowly devalued over time. This led to the reemergence of patriarchal authority, which allowed men to become the primary wage laborers with women providing the household work and social reproduction of the family. While women still labored in temporary work or provided additional support during times of need, the generalization is that most women (especially married women) were not gainfully employed wage laborers in the late nineteenth- and early twentieth-century.[10]

The alternative "industrious household" argument suggests that the redistribution of labor was an attempt to maximize household consumption patterns. With the rise of new consumption clusters since the mid seventeenth-century, breadwinner households moved towards specialization, which allowed families to maximize their production returns by having women focus on producing household commodities and social reproduction while men were able to provide the highest level of wages for the family. As the life cycle went on, children would also be incorporated into the labor structure of the household as necessary.[11]

While the redistribution of labor was beneficial to many families regarding efficiency, the movement towards this specialization was highly dressed in the language and ideology of gendered spheres. The "natural states" of independent men and dependent women were used as ideological justifications for why men and women belong in a specific sphere of influence. Jeanne Boydston argues that the wider economic context made household tasks appear less

[10] Boydston. xviii-xix; Joan M. Jensen. *Loosening the Bonds: Mid-Atlantic Farm Women, 1750-1850.* New Haven: Yale University Press. 1986. 33-35.

[11] Jan De Vries. *The Industrious Revolution: Consumer Behavior and the Household Economy, 1650 to the Present.* Cambridge: Cambridge University Press. 2008. 210-214. I plan on expanding here that specialization was not a broad movement towards progress, but that in the U.S. agricultural case, while New England moved towards specialization, the American South started at specializing and moved towards a more mixed economy. Naomi R. Lamoreaux. "Rethinking the Transition to Capitalism in the Early American Northeast." *The Journal of American History.* 90:2. 2003. 438, 449-450; Richard Lyman Bushman. "Markets and Composite Farms in Early America." *The William and Mary Quarterly*. 55:3. 1998. 361, 364-365, 368, 371-372.

valuable, and when combined with the language of the independent head of household, led to households maximizing their household productivity by having men work in the marketplace and women stay in the household.[12] While these "spheres" were not independent nor mutually exclusive of one another, it made economic sense for many families to utilize a breadwinner-homemaker household.[13]

The blurred lines of “farm work” and “house work” complicate these issues. Theodore Bost explains in a letter to his parents in 1855

> I ought to get married, and the sooner, the better. I am very happy as I am at present, but all these little household chores take a great deal of time-time that could be devoted to men's work. It doesn't make so much difference in the winter, but in the summer when I'll have the cows, pigs, hens, etc., to take care of, it will be more inconvenient, and if I could find a good, strong girl to marry, I would be relieved of these little chores and my outlay for food wouldn't be much greater, while there would be big savings in other respects.

Bost demarcated the gendered differences between farm work and housework, but at the same time, reinforces the need of one with the other. Without a wife to do housework, Theodore was forced to complete those chores instead, limiting his time to completing farm chores. These blurred lines of work unclear when spouses work in the field rather than within the house.[14]

Related to these wider changes, women's roles in agriculture also shifted due to the national land expansion and technological advances.[15] In a von Thünenian system, previous grain farming became more profitable on distant frontiers in the West, causing farms in the Northeast to shift to other forms of agriculture and household manufactures such as textiles, eggs, butter,

[12] Boydston. 18.
[13] De Vries. 200-202.
[14] Kerry J. Daly. “Deconstructing Family Time: From Ideology to Lived Experience.” *Journal of Marriage and Family*. 63:2. 2001. 284-285.
[15] Christopher Clark. "The Agrarian Context" in *Capitalism Takes Command: The Social Transformation of Nineteenth-Century America.* Ed. Michael Zakim, and Gary J. Kornblith. Chicago: University of Chicago Press. 2012. 28-29.

and dairy.[16] In the case of butter, while women performed the labor of churning butter, men controlled the earlier steps of the butter making process such as feeding and tending cows. As butter production became highly commoditized, men began to oversee other parts of the production process usually governed by women. As the nineteenth-century wore on, cooperative creameries began to emerge, which moved the location of butter making from the household to the factory.[17] Likewise, the rise of new technologies such as the scythe, which was far heavier and more burdensome than the sickle, slowly pushed women out of the work of haying. Women still helped with harvesting and planting, but the rise of threshers and steel plows also pushed women away from these tasks and towards household duties.[18]

INSERT FIGURE 1 HERE

Historically, children often acted as a substitute for women's labor. Through the family life cycle, a woman's role in farm labor rose until the first children reached ages 5 to 10. During this period, children were slowly trained in household and farm chores. While the tasks were often designated by gender, the distribution and birth order of sons and daughters more often determined who worked where than a strict separate spheres of men and women's work. Once children were fully working (aside from schooling), women slowly began to withdraw their labor from the family work force in agriculture. They still focused on "home manufacturing" and other household related-labor, but their work in the fields during planting and harvest were cut back unless necessity deemed otherwise. Figure 1 shows this relationship graphically.[19]

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[16] Steven Stoll. *Larding the Lean Earth: Soil and Society in Nineteenth-Century America. Hill and Wang. 2003.*
[17] Commission on Rural Life, 38-42; Sally McMurry. *Transforming Rural Life: Dairying, Families and Agricultural Change, 1820-1885*. John Hopkins University Press, 1995. 9.
[18] Jensen, 54-56; Steven R. Hoffbeck. *The Haymakers: A Chronicle of Five Farm Families*. Minneapolis: Minnesota Historical Society. 2000. 23; Ed. Lucy Leavenworth Wilder Morris. *Old Rail Fence Corners: Frontier Tales Told by Minnesota Pioneers*. St. Paul: Minnesota Historical Society Press. 1976.
[19] De Vries. 200.

The industrialization of household technologies redistributed work within the household. While the Rural Commission argued in favor of new technologies via agricultural extension and home economics training, Cowan argued that technologies such as the stove and sewing machine greatly reduced the amount of work for that particular task. Industrialization and the breadwinner-housemaker household structure led to a substitution towards more labor in other formats rather than leisure.[20]

UNPAID LABOR IN THE U.S. CENSUS

The United States Census collected detailed occupational information for individuals in the Population schedules starting in 1850.[21] Issues of enumeration universes, ambiguity from the concept of "gainful employment", and newly developing restrictions on what constituted labor complicate the measurement and harmonization of farm labor using Census sources. Whether an individual reported an occupation upon enumeration varied between census years. This creates the problem of how to approach the measurement of farm labor. On the one hand, utilizing a harmonized occupation variable created by IPUMS provides a control for the universe of respondents, allowing a comparison of change over time at the cost of the context and the measurement of groups who are likely to have their occupations under or unreported such as women and children.[22]

With lower age limits, the labor of children will often be unreported for many years such as 1850, 1860, 1880, and 1900 (Table 1). In 1850, the occupation question was only asked of

[20] Ruth Schwartz Cowan. *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*. Basic Books, 1983. 2-6; Commission on Rural Life. 42-44.

[21] While occupational information regarding industry had been collected in 1820 and 1840, because the census enumerated "households" rather than "individuals" before 1850, a particular individual's occupation cannot be identified. The IPUMS-USA project at the Minnesota Population Center currently only has public-use samples dating back to 1850, but is in the process of developing household-level samples for 1790 through 1840 that will have this industry information available.

[22] Steven Ruggles, et al. *Integrated Public Use Microdata Series: Version 5.0* [Machine-readable database]. Minneapolis: University of Minnesota, 2010.

men, making it impossible to measure women's labor without making several assumptions about women's labor on the farm. Additionally, 1850 and 1860 was limited to the free population, which means that the institution of slavery is completely ignored. The Minnesota Population Center will soon be releasing a 100% population sample of the 1850 census with data on slaves linked with the free population data.

INSERT TABLE 1 HERE

The next problem to address is the ambiguity behind "gainful employment". While not formally defined in the Census, one of the defining attributes of "gainful employment" is the primary work performed by an individual that earns money. While the enumerator instruction for the primary occupation or choosing between two occupations is straightforward, gainful employment was not defined by time constraints and contained vague references to occasionally or usually working. With little direction provided to census enumerators, many women and children are at risk of not reporting an occupation.[23]

This ambiguity may be further troubled with who was responding to the enumerator. It is possible that husbands and fathers were less likely to report their spouses or children with an occupation, even if they perform several agricultural duties. While in no way definitive, the 1940 Census recorded who the respondent for the household was. Measuring whether women and children have higher rates of occupational reporting when a non-head or non-male answered the question could provide interesting suggestions on the roles that men and women perceived each other as having on the farm. Having laid out the problems of measuring agricultural labor, I am going to summarize how farmers, wage laborers, and family laborer were defined by the census

[23] This is a topic I need to explore more. As I've looked into this more, it seems like there are minor changes in what "gainful employment" meant in each census. I don't believe it should alter my arguments too much, but I still need to investigate it.

for each year and discuss how agricultural labor was distributed by age, sex, race, ethnicity, generation, and region.

FARM OCCUPATIONAL DEFINITIONS 1850-1940

Questions of Industry were first asked in the 1820 and 1840 Population Censuses. While Agriculture was one of the industries inquired, because the census was conducted by households rather than individuals in households, researchers have no way of knowing precisely which people were laboring in agriculture. 1850 is the first year the Census asked questions of individuals rather than households. In 1850 the Census defined farmers as "The proprietor of a farm for the time being, who pursues agriculture professional or practically, is to be recorded as a farmer; the men who are employed for wages by him are to be termed farm laborers."[24] By distinguishing between "professional or practical" farmers, the Census recognized agriculture both for its distinction as a subsistence oriented unit as well as the market orientation of larger scale farming. Farm laborers were defined as those who worked for wages. Theoretically, this would exclude any family laborers who are not working for wages, though some children working for the family may have still received the farm laborer occupation.

Starting in 1870 and continuing through 1890, the U.S. Census collected information on women working within households for no wages. Spouses keeping house for their families with no other occupation were recorded as "Keeping House". Alternatively, women "who receive a stated wage or salary for their services" of household caretaking where termed "Housekeepers." Daughters fulfilling the "Keeping House" duties were reported with no occupation in 1870 and 1880. In 1890, this rule was changed to "Housework-without pay." Similarly, the Census was interested in gainful employment as suggested by the following statement regarding children;

[24] *1850 Census: Instructions to Enumerators*. Minnesota Population Center. Accessed 11/1/2013. https://usa.ipums.org/usa/voliii/inst1850.shtml

> The inquiry as to Occupation will not be asked in respect to infants or children too young to take any part in production. Neither will the doing of domestic errands or family chores out of school be considered an occupation. "At home" or "Attending School" will be the best entry in the majority of cases. But if a boy or girl, whatever the age, is earning money regularly by labor, contributing to the family support, or appreciably assisting in mechanical or agricultural industry, the occupation should be stated.[25]

While the vague definition of "appreciably assisting" clearly indicates the unreliability of measuring unpaid family labor and the common occurrence of children working for family establishments while attending school at the same time, it would seem appropriate to assume that many children (at least those over the age of 10 but arguably younger) recorded as "At home" or "Attending School" were laboring on the farm or within the household in some capacity. On the Peterson farm (which I will discuss in detail next chapter), Andrew's sons are spending a significant amount of time working on farm tasks with Andrew. In the Census, however, the occupations for all of his sons are non-occupational responses. In 1900, the Census Bureau specified that older children who work on the farm should be returned as farm laborers. If the father and son(s) jointly operated the farm for fixed shares of the product, then the sons should be returned as farmers. The Census also discontinued collecting "Keeping House" as a non-occupational response in 1900.[26]

For all the information collected by the Census, capturing all wage farm laborers is still difficult. The mobility of the American work force forced many workers to roam from job to job. Hoboes would take jobs such as lumbering, factory jobs, cutting ice during the winter, and harvesting jobs during the fall. These workers are likely not captured in the farm laboring work force because the enumeration months were often in the spring or winter when farm laboring had

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[25] *1870 Census: Instructions to Enumerators*. Minnesota Population Center. Accessed 11/1/2013. https://usa.ipums.org/usa/voliii/inst1870.shtml

[26] *1910 Census: Instructions to Enumerators*. Minnesota Population Center. Accessed 11/1/2013.0https://usa.ipums.org/usa/voliii/inst1900.shtml

a lower demand for work (even with spring planting). More likely, they appear in these other jobs or as non-classified laborers.[27]

Due to the blurred lines of housework and farm work, there was room for interpretation of what constituted farm work. The 1910 Enumerator Instructions stated

> A woman working regularly at outdoor farm work, even though she works on the home farm for her husband, son, or other relative and does not receive money wages, should be returned in column 18 as a *farm laborer*. Distinguish, however, such women who work on the home farm from those who work away from home, by writing in column 19 either *home farm* or *working out*, as the case may require.[28]

Approximately 19% of white female spouses and 22% of black female spouses were recorded as paid farm laborers in 1910. The Census Bureau likely considered this as an overestimate and further restricted the definition of farm work in 1920, stating

> For a woman who works *only occasionally*, or *only a short time each day* at outdoor farm or garden work, or in the dairy, or in caring for livestock or poultry, the return should be *none*; but for a woman who works *regularly* and *most of the time at* such work, the return should be *farm laborer-home farm; farm laborer-working out; laborer-garden; laborer-dairy farm; laborer-stock farm;* or *laborer-poultry yard* as the case may be.[29]

While the definition for regularly working was still maintained, the 1920 Census shifted the emphasis on identifying women and children who did not do enough work versus those who did. This suggests that Census officials felt that too many women and children were being considered laborers in some capacity when the officials believed they should not be. In a 1929 Census monograph, Joseph Hill more or less confirmed these suspicions on the changing definitions. Hill wrote

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[27] Frank Tobias Higbie. *Indispensable Outcasts: Hobo Workers and Community in the American Midwest, 1880-1930.* 100-105. Margo Anderson-Conk. "Occupational Classification in the United States Census: 1870-1940." *Journal of Interdisciplinary History*. 9:1. 1978. 124, 127-128, 130.

[28] *1910 Census: Instructions to Enumerators*. Minnesota Population Center. Accessed 11/1/2013. https://usa.ipums.org/usa/voliii/inst1910.shtml

[29] *1920 Census: Instructions to Enumerators*. Minnesota Population Center. Accessed 11/1/2013. https://usa.ipums.org/usa/voliii/inst1920.shtml

> In 1910 the emphasis was upon r*eturning* as a farm laborer every woman working regularly at outdoor farm work; in 1920 the emphasis was upon *not returning* as a farm laborer any woman who worked at outdoor work only occasionally or only a short time each day, thus indicating in the one case an apprehension that the enumerator might fail to return as a farm laborer some woman who ought to be so returned and in the other case that he might return as a farm laborers one woman who ought not to be so returned. This change of emphasis came about because a study of the occupation returns convinced those who had charge of the tabulation in 1910 that many women had been returned as farm laborers who could not be properly regarded as such-that there was, in short, an over enumeration of women farm laborers.[30]

The other comparability issue is that the Census was usually conducted starting in the spring or early summer between April and June. For the 1920 Census however, the Bureau began collecting information in January. Because of the seasonality of agricultural work, this introduces a clear bias towards non-work. Hill, and Alba Edwards, an Expert Special Agent at the Bureau of the Census, argued that the change in date was far more important in describing the sharp decline in agricultural laborers between 1910 and 1920 than the change in definition.[31]

The agricultural laborer definition is maintained through the 1930 census. Starting in 1940, the class of worker question was further refined, but still failed to alleviate enumerator's interpretations of unpaid labor. In the 1940 Procedural History, Robert Jenkins described that

> There were also difficulties in obtaining correct reports of unpaid family workers due to discrepancies in enumerator interpretations. These problems were considered to be particularly acute in rural areas where there was a lack of any clear distinction in the typical farm household between workers in the family enterprise and homemakers or dependents.[32]

Additionally, the 1940 Census began asking questions of the labor force rather than those gainfully employed. Here, the labor force is defined as the occupation you worked in the last

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[30] Joseph A. Hill. *Women in Gainful Occupations 1870-1920: A Study of the Trend of Recent Changes in the Numbers, Occupational Distribution, and Family Relationship of Women Reported in the Census as Following a Gainful Occupation.* Department of Commerce, Bureau of the Census. Washington D.C. 1929. 17.

[31] Hill. 16; *Children in Gainful Occupations at the Fourteenth Census of the United States.* Alba Edwards. Department of Commerce, Bureau of the Census. Washington D.C. 1924. 14.

[32] Robert Jenkins. *Procedural History of the 1940 Census of Population and Housing.* Madison, WI: The Center for Demography and Ecology, University of Wisconsin. 1983. 97.

week, excluding new workers. This change helped the Federal government analyze the actual population looking for work or working, which allowed the government to measure issues related to unemployment. The consequence of this change is that seasonal workers were less likely to report an occupation reported and new workers were excluded altogether.[33]

The blurred lines of farm and home were still not clearly defined for enumerators by 1940. The 1950 Census finally provided a strict cut off for unpaid labor in terms of hours worked. According to Morris Ullman,

> The number of hours worked during the week was a factor in determining whether a person was counted as a worker. The farm operator was considered working if he worked 1 or more hours. The hired worker was counted if he worked any time at all. But the member of the operator's family who worked without pay was counted only if he worked 15 hours or more during the week.[34]

This standard of what constituted farm labor and the gendered language of farm labor underreports the labor of groups likely to fall into these categories, namely spouses. If this definition would have been applied retroactively to 1940, 27 percent of spouses would no longer be included as unpaid laborers, compared to 9 percent for sons and daughters. In some capacity, this reflects the changing roles of women's labor force participation and changes in the industrial farm process, but likely still misrepresents women's work on farms.

For harmonization purposes, IPUMS-USA codes several occupations as "Non-occupational Responses". This includes terms such as "Keeping House", "Retired", "At School", and "At Home" among others. While they help in the measurement of wage labor, these categories are likely excluded from many farm analyses as non-occupational responses. These responses however still represent a particular aspect of the family farm.

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[33] Anderson-Conk. 115.
[34] Morris B. Ullman. *The 1950 Censuses - How They Were Taken: Procedural Studies of the 1950 Censuses, No 2*. Washington D.C.: Department of Commerce. 1955. 80.

Seasonal farm work was common, with many tasks being prioritized based on planting and harvesting. As such, it is likely that many family members who worked on farms were utilized more often in a seasonal nature rather than year-round. Because of this, it is possible that seasonal labor was not enumerated as having a legitimate Occupational Category and is missing in the agricultural narrative. In Chapter 4, I will discuss in depth a micro-level example of a Minnesota farm family and the different roles of work for each family member. In that particular case, Andrew Peterson's sons, who are clearly working on the farm in these diaries, show up in the Census as "At Home". Recoded as "helping parents" or "helping at home", these individuals need to be considered in any measure of farm work.

Tasks were often gender specific, but tasks also were based on the family composition. If a farmer had no sons but several daughters, these daughters were completing tasks considered appropriate for men. Women often structured their work on a pattern of weekly chores that were necessary for the farm's success. Because of the rural culture of ridiculing men doing women's work, men's diaries often do not value or even mention any of the daily chores women perform.[35]

TRADITIONAL CENSUS MEASURES

Using the data as it is largely given from the Census, the traditional census narrative largely supports the view that white men were the primary labor force on farms. The exception to this rule is in the antebellum period when slaves made up a large, though slightly smaller percentage of the agricultural labor force than men who were classified as farmers. In the mid nineteenth-century, agricultural workers tended to be younger, but by 1930 the peak age of farm workers had risen to between 35 and 45. Much of the agricultural literature focuses on immigration and its effects on agriculture at the local or regional level, but nationally, 3rd

[35] Neth. 26-27.

generation or older Americans made up the majority of the farm workers.[36] Immigrant farmers also tended to be older, with the majority being between the of 40 to 59. For 2nd generation or later farm workers, peak age was between 15 and 29. This reflects the economic context of new migrants (who were older) versus children leaving home (who were younger), as well as my argument regarding the primary role that children played in the farming economy.

INSERT FIGURES 2-4 HERE

Slaves made up a large proportion of the agricultural male working force in 1850 at approximately 42%. By 1880, African American men and women made up approximately 20% of the agricultural work force. This share declined over the next five decades. Women made up a small part of the agricultural work force at approximately 7%, and mostly consisted of laborers rather than farmers. Farmers made up approximately 53 to 57% of the agricultural work force between 1850 and 1930.

INSERT TABLE 2 HERE

Table 2 shows the average number of workers per household between 1850 and 1940. The first column shows the average number of all workers over the age of 15. The second column shows the average number of male workers over the age of 15. Before 1880, men made up the majority of the workers since the number of male workers is higher than all workers. Starting in 1900, however, the household balanced out. The proportion of female agricultural workers is more important based on the average number of male workers being lower than the average number of all workers. By 1930, however, the difference is largely diminished.[37]

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[36] Jon Gjerde. *From Peasants to Farmers: The Migration from Balestrand, Norway to the Upper Middle West*. New York, 1985; D. Aidan McQuillan. *Prevailing over Time: Ethnic Adjustment on the Kansas Prairies, 1875-1925*. Lincoln: University of Nebraska Press, 1990; Robert Clifford Ostergren. *A Community Transplanted: The Trans-Atlantic Experience of a Swedish Immigrant Settlement in the Upper Middle West, 1835-1915*. Madison: University of Wisconsin Press, 1988.

[37] The discrepancy in the average number of workers age 15+ and the average number of male workers age 15+ in 1850 is due to the fact that women did not report an occupation in that census.

Based on the above statistics and figures, the general takeaway is that agriculture was predominantly male and white. The exception to this generalization is the importance of slavery in the antebellum period. Based on this narrative, children played a large role based on the fact that the highest peak of agricultural employment for most of this period was between the ages of 15 and 29. However, as previously stated, this still likely underreports the role that children played because of schooling and how occupation was collected. Adult women are largely absent in this narrative, and exist in the unmeasured "Keeping House" and thus reinforcing the separate spheres ideology. As the literature has shown, while the separate spheres for men and women were often discussed, the two "spheres" were highly dependent on one another and not exclusively separate. To understand the importance of women and children, historians of the family and agriculture must include family housework because of its intertwining with the household. I will now transition to an alternative measure of the distribution of household labor.[38]

ALTERNATIVE MEASURE

In order to fully capture the roles that women and children played on farms, we must include a measure of household work. The easy answer would be to simply include anybody over the age of five or ten and assume they were doing some sort of household work, but this over simplistic approach would likely be too high. Based on how the Census captures farm labor, I propose making a few assumptions about measuring farm labor in the census to capture different aspects of farm work.

Occupational response. Many children's occupation was reported as "At Home," "At School," or "Helping parents." Because these are non-occupations that do not fit in an industry,

[38] Lu Ann Jones. *Mama Learned Us to Work: Farm Women in the New South.* Chapel Hill: University of North Carolina Press. 2001.2-6; Paul C. Rosenblatt. *Farming is in Our Blood: Farm Families in Economic Crisis.* Ames: Iowa State University Press. 1990. 53-68.

they need to be considered. These are cases where individuals with these responses were probably working in some capacity, albeit possibly not at the time of enumeration due to the seasonality of work.

Household structure. Older siblings are more likely to work in the fields than younger siblings. While it varies from farm to farm, boys over the age of 10 are certainly working in the fields, with the exception being if there are several older brothers. Eldest daughters with no older brothers are more likely to be working in the fields. All children between the ages of 5 to 9 are transitioning to working in the household and doing local chores such as feeding chickens, laundry, cooking, etc. Finally, the presence of other family members of working age and boarders suggest they may be providing household labor on the farm too. No children or other individuals in the household suggest wives are likely working in the fields, especially for immigrant households and households where the couple is in the earliest stages of the family life cycle.

Number of farm schedules. In the early twentieth-century, the Population schedules recorded who filled out a farm schedule. While the majority of farms had only one reporter (usually the head) some farms had multiple schedules filled out. This helps determine the managerial role of other reporters on the farm.[39]

County Context. I utilize contextual variables at the county and township level to suggest different patterns of work for communities that are more similar than communities that exhibit large levels of dissimilarities or differences. Such variables include land values, ethnic and racial composition, tenancy status, religious groups (for earlier census years), wages and hired laborers,

[39] At this point, there are several hundred cases where a non-farm occupation individual or an individual with no occupation received a farm schedule. I am looking into this issue still to determine what is happening in these cases.

value of implements and capital, sex ratios, population density, fertility, agricultural extension, education, etc.[40]

Age Structure. Related to household structure, I take into account the age and moment of the family life cycle. A quick example is a wife in her late twenties with one child is more likely to be working in the fields than a wife with seven children in her fifties. This measure will be based on the length of a marriage (when applicable and available), number of children, and age.

ANALYSIS

Before I discuss the distribution of occupations, I should first address the changes between 1910 and 1920. As mentioned above, there was a sharp decline in occupational reporting for women and children in the 1920 census. It was attributed to a slight change in the definition of agricultural labor and a change in the date of enumeration. While it's impossible to determine which change was predominant, I can measure the effect of the month of enumeration. Using a pooled logistic model for women over the age of 15 between 1880 and 1930, I can measure the effect of the month of enumeration on reporting an occupation. These results should be considered preliminary, as there is no control for the change in definition other than the year of enumeration, which still has several confounding factors and selection bias.[41] For example, if the majority of the population is enumerated in June, those who are enumerated in July and August may be migrants or people who were missed in the initial enumeration. Due to that, people who are not enumerated in the primary month may be more likely to report occupations not because of the actual work performed, but other inherent demographic, cultural, and economic reasons.

[40] For this draft, I have not included the county context, but the data will be coming from one of two sources. For 1850, 1880, and 1940, some of the contextual variables will be created from the 100% samples. For the other years, I will use government published statistics at the county level provided by the National Historic Geographic Information System (NHGIS) at the Minnesota Population Center.

[41] Other confounding elements can be underreporting of people, migration, and economic climate to name a few.

That issue aside for now, Figures 5-7 shows the distribution of what month individuals were enumerated in between 1850 and 1930. 1850 showed quite a bit of dispersion over several months. 1860 and 1870 show a similar trend, but instead of mostly being spread out in a bell curve, the enumeration began in June and spread through the remaining population slowly. 1880 and 1900 are the first years where the majority of the enumeration (over 95%) occurred in June. This is also likely the case for 1910 in April, but a large number of records are missing the month of enumeration. As mentioned previously, 1920 shows most of the enumeration occurring in January and 1930's primary enumeration occurred in April.

INSERT FIGURES 5-7 HERE

The pooled logistic model (Model 1) below shows that with the exception of September and December, women over the age of 15 were more likely to report an agricultural occupation in any other month compared to January, which was the primary month of enumeration in 1920.[42] When individual year models are run, the results change between years suggesting that this relationship may not be particularly strong, although the results are robust for 1920 when compared with the pooled model. Compared to 1880, women over the age of 15 were more likely to respond with an occupation in 1910 and 1920, but the odds begin to decline between 1910 and 1920, possibly reflecting the change in definition.

INSERT MODEL 1 HERE

The second issue mentioned earlier concerns who the respondent for the household was. Whether the head of household, a neighbor, parent or spouse, the results could vary depending on who answered for the whole family. In 1940, enumerators recorded who the respondent for a household was. Preliminary results show that when the respondent for a household was a

[42] As mentioned previously, this is preliminary. As can be seen in Figures 5-7, the percentage of women over the age of 15 enumerated in the months of July through December is very small, which may be leading to biased conclusions.

neighbor, 7.61% of women reported an occupation. When the respondent was a woman in the household, the rate rose to 9.44% of women. When the respondent was a male from the household however, only 4.69% of women over the age of 15 were reported with an occupation. Logistic regression confirms these results as seen in Model 2.[43]

INSERT MODEL 2 HERE

The first step of this process is to add in all people with a non-occupational response. These are cases where an individual was reported as "Keeping House", "At School", etc. Because of the intertwining nature of agricultural and household work during this time period, it is unlikely that these non-occupational response individuals were not doing any farm work during specific seasons such as planting or harvest. These individuals were also likely to be doing work within the household producing farm commodities such as butter, dairy, eggs, etc.

When accounting for non-occupational responses in the average number of workers per household, we see it rise to between 2 to 4 people per household (see Table 3). In this case, accounting for only men is higher than the average for all workers, suggesting when including the non-occupational measure, sons who reported a non-occupation are making up a larger addition to the household labor force than daughters. This does not mean that daughters are not contributing work, only that males are even more highly represented in non-occupational categories such as “At Home” or “At School”.

INSERT TABLE 3 HERE

The common theme through all of these census years is that the highest proportion of workers was between the ages of 15 and 24 (see Figures 8-14). The one exception in 1900 is due to a higher return of "At School" children than previous years. While men still outnumber

[43] This concern about the respondent seems like a tangent, and at this point it is. I hope to use this as an example of the fact that men's and women's responses can be different. Because of that, we need to keep in mind as historians that we do not know who responded to the Census and this can lead to small biases in the data.

women in every year, women make up the largest proportions in 1870 and 1880 because of the inclusion of "Keeping House." Between 1870 and 1880, women make up approximately 42% of the household. Because of the decline of using non-occupational responses as an occupational category, this measure would arguably be a liberal estimate of women's labor for agricultural work.

The distribution of occupational and non-occupational responses varies year to year. This is due largely to the changing definition and utilization of non-occupational responses. As mentioned previously, children in 1900 were far more likely to be given an "At School" designation than any other year. The distribution of occupation versus non-occupational responses suggests there is a dramatic rise in non-occupational responses between 1870 and 1900. This is due to reporting "Keeping House" and "At School" among women and children. While the enumeration rules of farm labor responses in 1910 were considerably more flexible than previous years, there was also a sharp decline in non-occupational responses. By 1930, less than 1% of responses in family farm households were non-occupational responses.[44]

INSERT FIGURES 8-14 HERE

CONCLUSION

The Census is one of our richest resources for measuring socioeconomic status for the nation after 1850. However, because of the biases in the Census regarding gender and the nation's interest in measuring economic output via wage labor rather than household production, measuring family farm labor, especially in a period where family farms participated in a mixed

[44] The ultimate purpose of this chapter is to utilize the family life cycle to look at "blank" as well as non-occupational responses. Assuming people follow the traditional family life cycle, one could theoretically measure approximately how many people may have been working in agricultural pursuits. The problem I am still trying to resolve is that this is ultimately a counter-factual method, and I want to avoid the issue of presuming my subject of study is following a prescribed teleological path of working or not working. While the family life cycle has been well established in the literature, I am still working out how to write this while still maintaining the historical context of farm families. Any thoughts or suggestions on this would be greatly appreciated.

economy rather than fully specializing in one or two crops during industrialization, means that the labor of children, and especially wives, is largely neglected and ignored. In order to fully measure the contribution of these two groups, incorporating the household tasks along with agricultural tasks not normally captured by field work such as butter, dairy, and poultry, any measure of farm work needs to incorporate these groups. The Census experiences difficulty in capturing the role of kinship and social networks because there is no foolproof method to determine who worked with whom. But like women and children, we can capture some aspects of the social networks at farmers with the new development of 100% data samples of the Census. But explaining how the Census can capture kin and social networks cannot be attempted without understanding how kin and social networks operated. Several authors discuss the importance of these networks, but no historian has yet measured the frequency of these networks. Luckily, some farmer diaries for a full family life cycle exist which allow us to grasp the importance of kin and social networks and ideas on how to measure it.

Figure 1: Female Life Cycle of Agricultural Labor

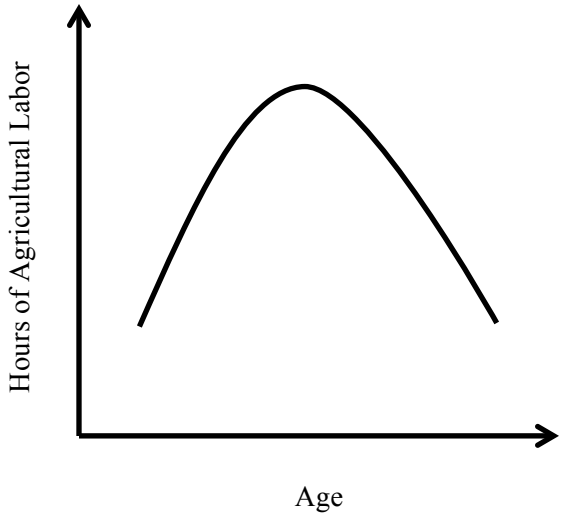


Table 1: U.S. Census Universe for Occupation by Year, 1850-2000

Year	Universe
1850	Free Males Age 15+
1860	Free Persons Age 15+
1870	All persons
1880-1890	Persons Age 10+ and others with a regular occupation
1900	Persons Age 10+ who worked or looked for work during previous twelve months, and non-working "capitalists".
1910-1930	All Persons
1940-1950	Persons Age 14+ and in the labor force; not institutional inmates; not new workers

Source: IPUMS-USA, https://usa.ipums.org/usa-action/variables/OCC1950#universe_section

Table 2: Average Number of Household Agricultural Workers Age 15+, 1850-1940

Year	All Workers	Male Workers
1850	1.78	1.91
1860	1.63	1.68
1870	1.70	1.73
1880	1.77	1.81
1900	1.81	1.80
1910	1.84	1.75
1920	1.60	1.56
1930	1.65	1.64
1940	1.56	1.54

Source: IPUMS-USA

Figure 2: Occupation Distribution of Male Agricultural Workers, 1850

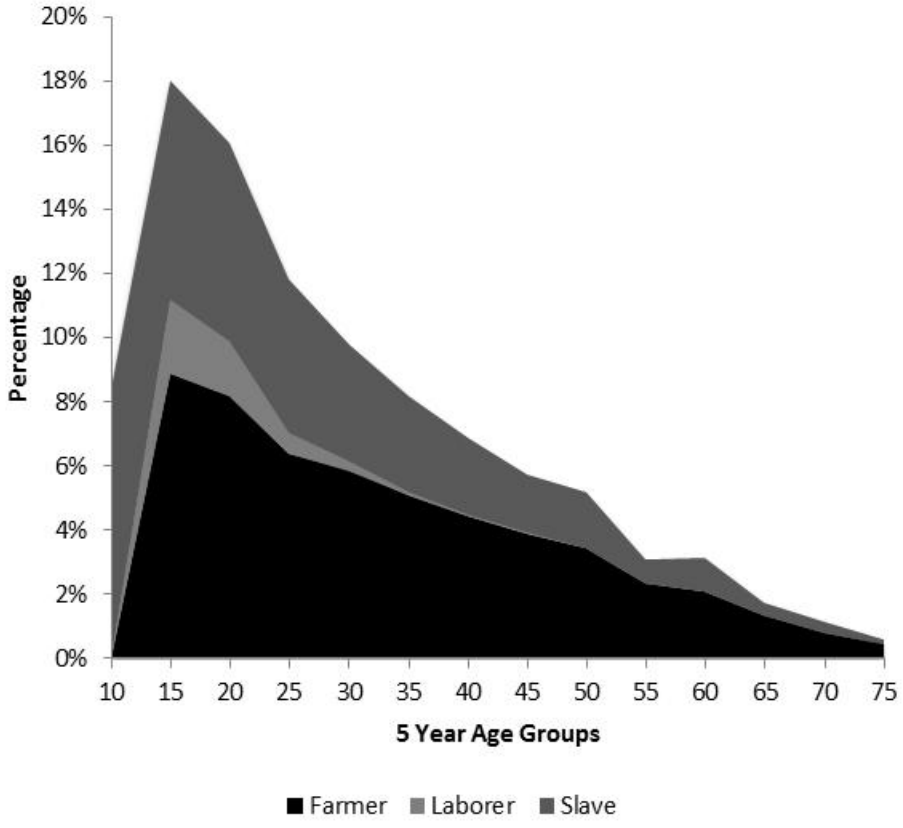


Figure 3: Occupation Distribution of Agricultural Workers, 1880

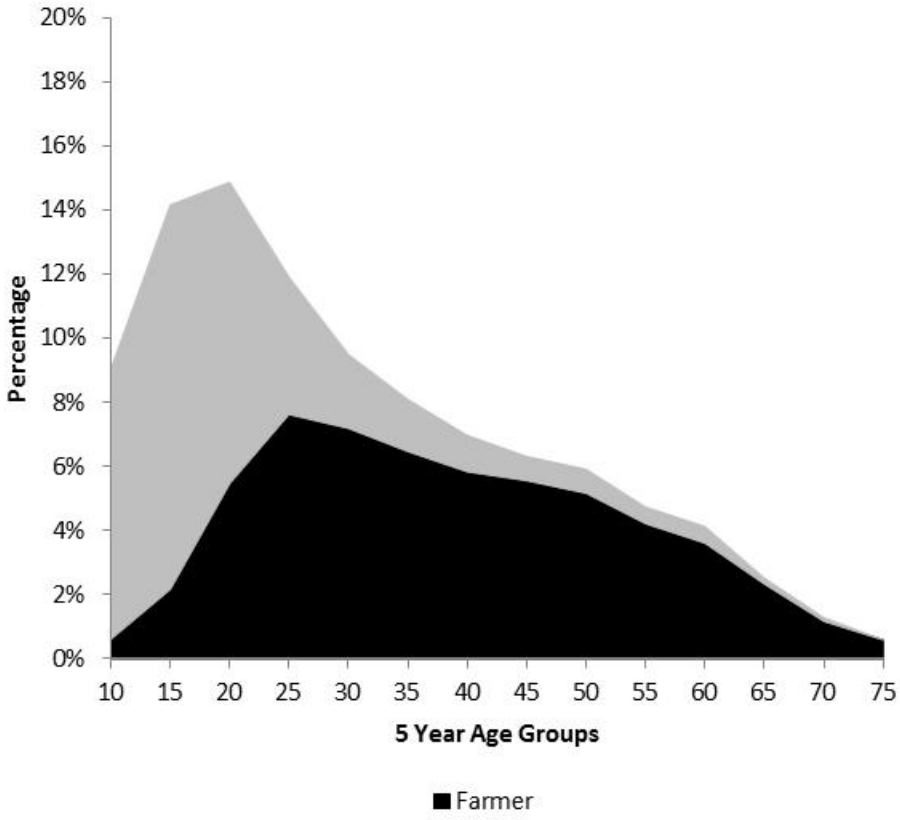


Figure 4: Occupational Distribution of Agricultural Workers 1930

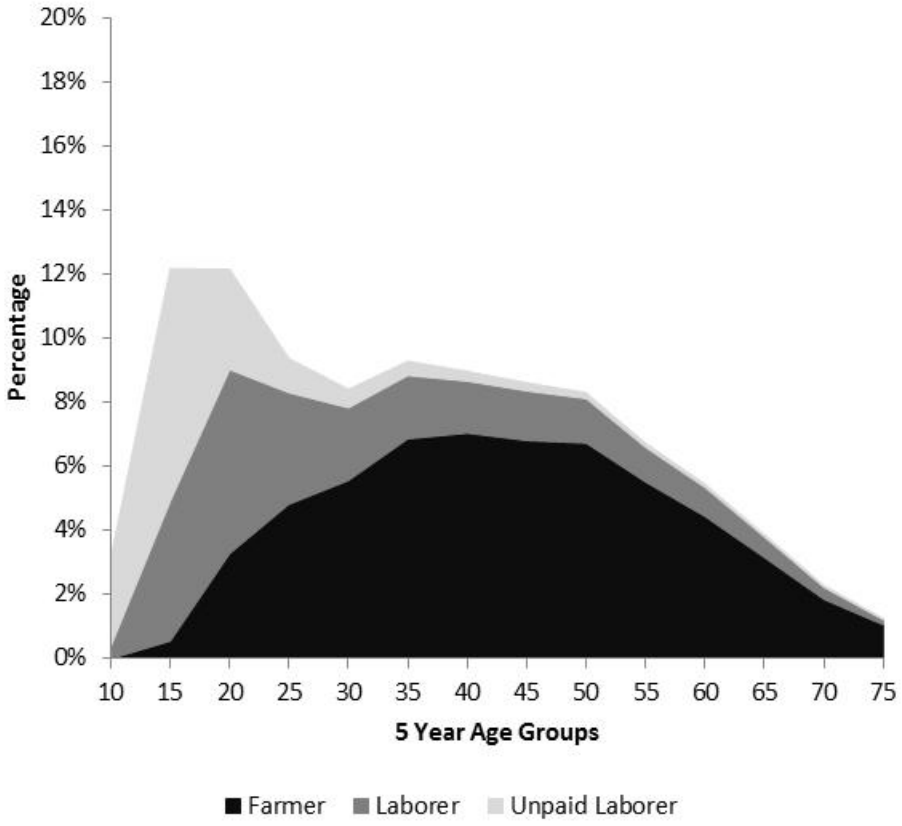


Figure 5: Month of Enumeration in 1850-1870 Census

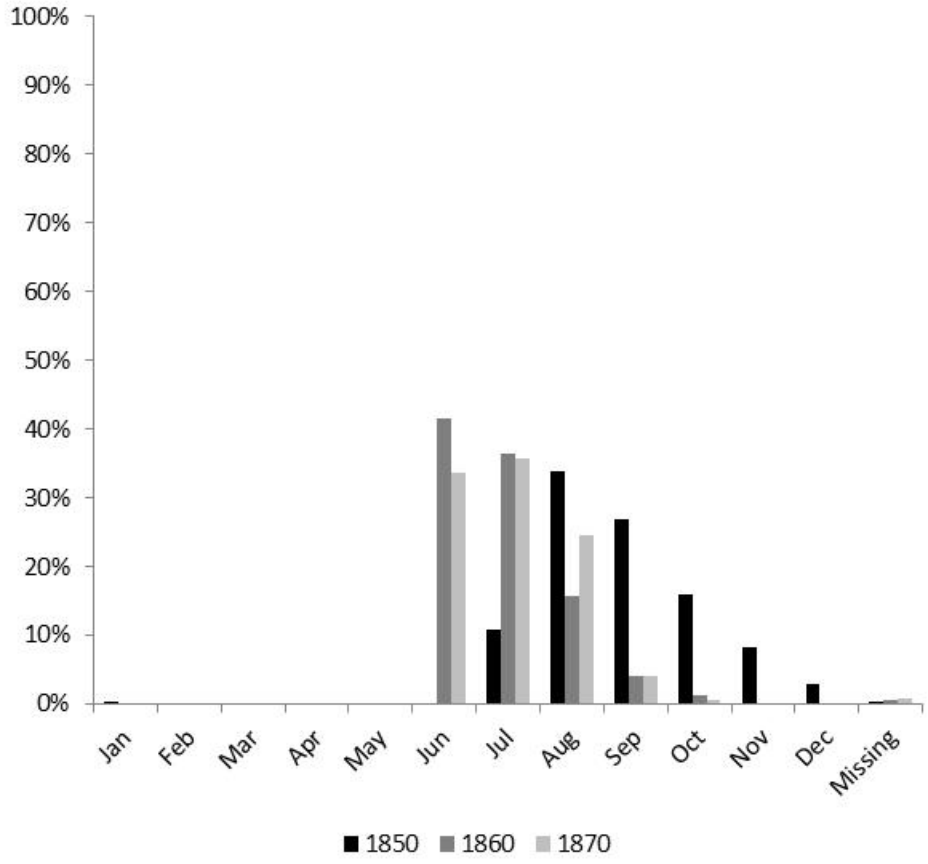


Figure 6: Month of Enumeration in 1880, 1900 Census

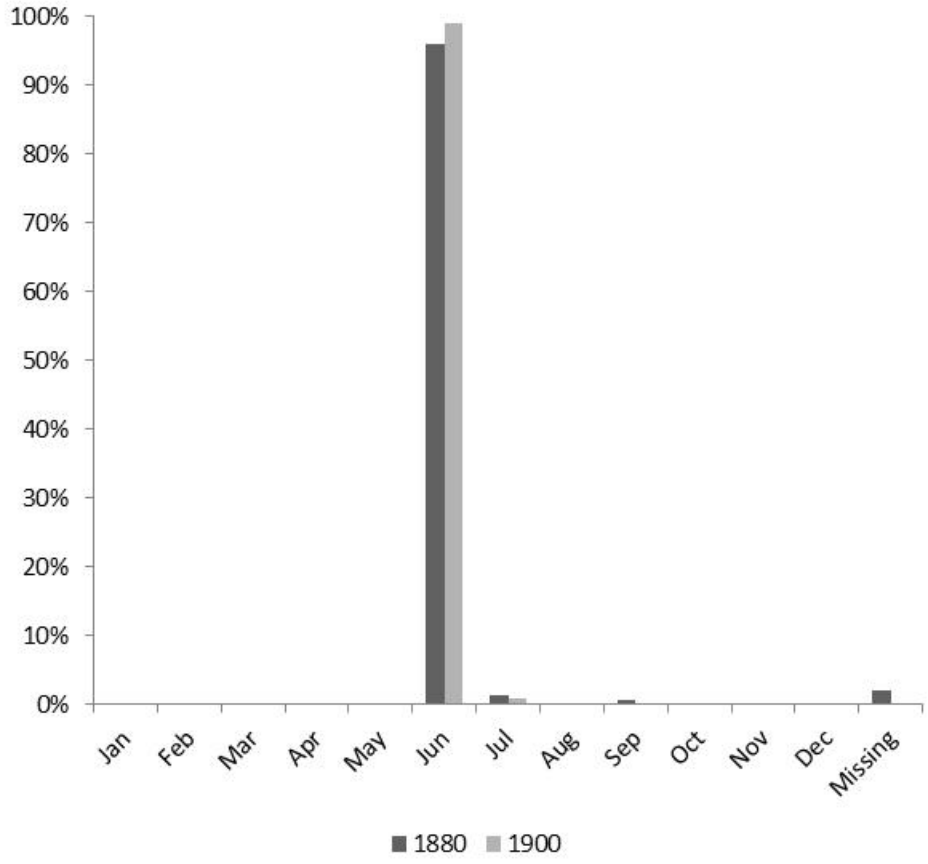
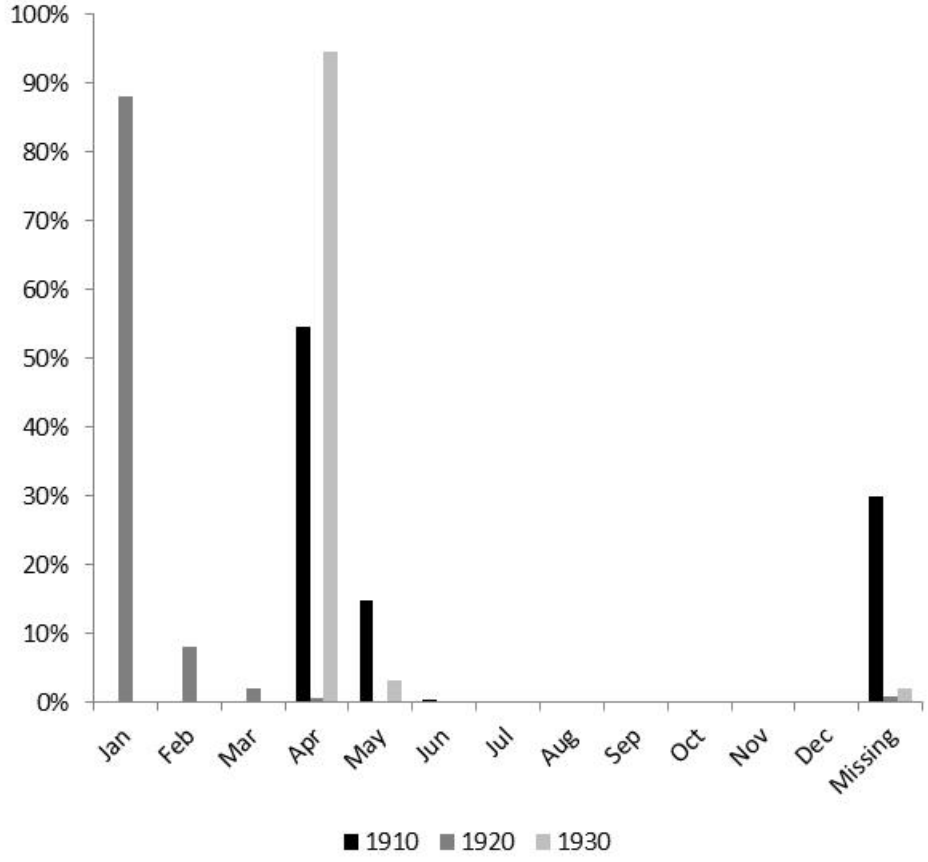


Figure 7: Month of Enumeration in 1910-1930 Census



Model 1: Odds Ratios for Reporting an Occupation by Month of Enumeration, 1880-1930

Month	OR	SE	Sig
January	-	-	-
February	1.75	0.006	***
March	1.92	0.010	***
April	1.76	0.013	***
May	3.30	0.026	***
June	3.47	0.043	***
July	4.14	0.056	***
August	2.28	0.076	***
September	0.76	0.041	***
October	1.14	0.058	**
November	1.14	0.068	*
December	0.19	0.025	***

Source: IPUMS-USA

Model 2: Odds Ratios for Reporting an Occupation by Respondent, 1940

Respondent	OR	SE	Sig
Male	-	-	-
Neighbor	1.154	0.005	***
Female	1.184	0.004	***

Source: IPUMS-USA

Table 3: Average Number of Household Occupation and Non-Occupation Agricultural Workers Age 15+, 1850-1940

	Occupation		Occupation & Non-Occupation	
Year	All Workers	Male Workers	All Workers	Male Workers
1850	1.78	1.91	--	--
1860	1.63	1.68	2.06	2.15
1870	1.70	1.73	3.94	4.05
1880	1.77	1.81	3.97	4.10
1900	1.81	1.80	3.52	3.66
1910	1.84	1.75	3.63	3.76
1920	1.60	1.56	2.73	2.84
1930	1.65	1.64	2.81	2.95
1940	1.56	1.54	--	--

Source: IPUMS-USA

Figure 8: Occupation and Non-Occupational Farm Workers by Sex, 1860

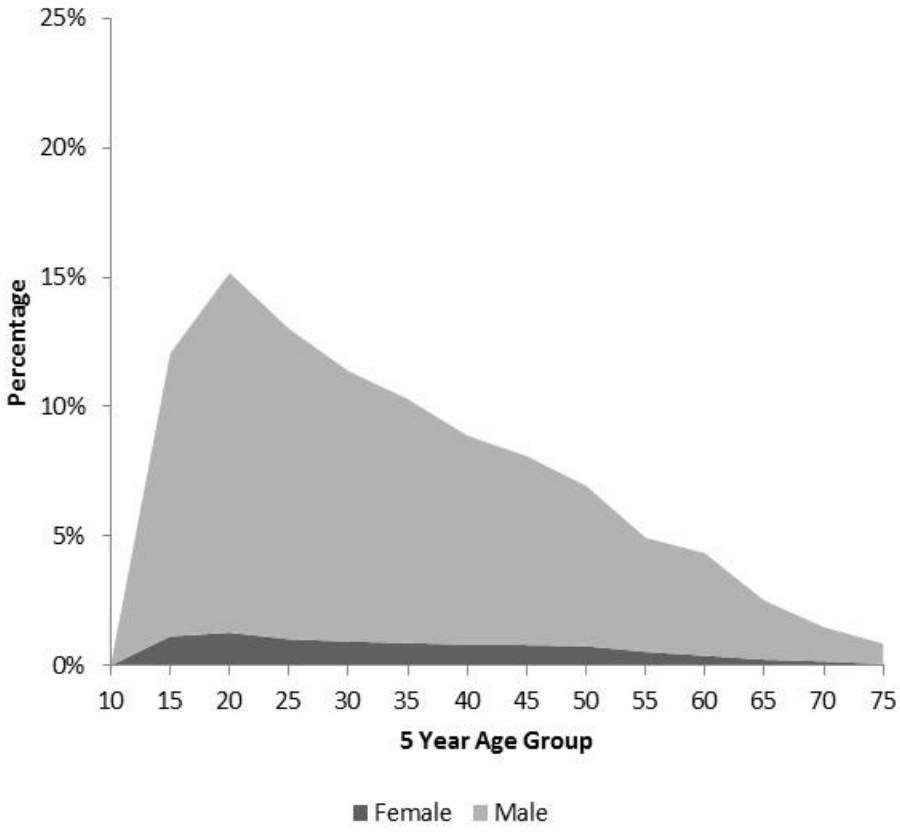


Figure 9: Occupation and Non-Occupational Farm Workers, 1870

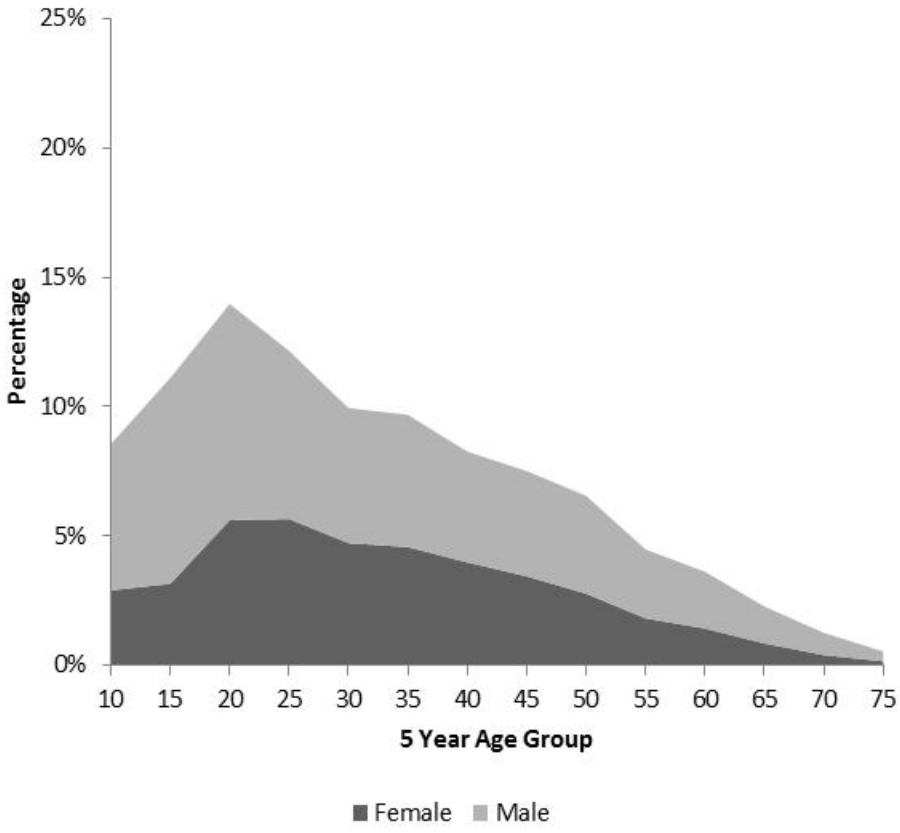


Figure 10: Occupation and Non-Occupational Farm Workers, 1880

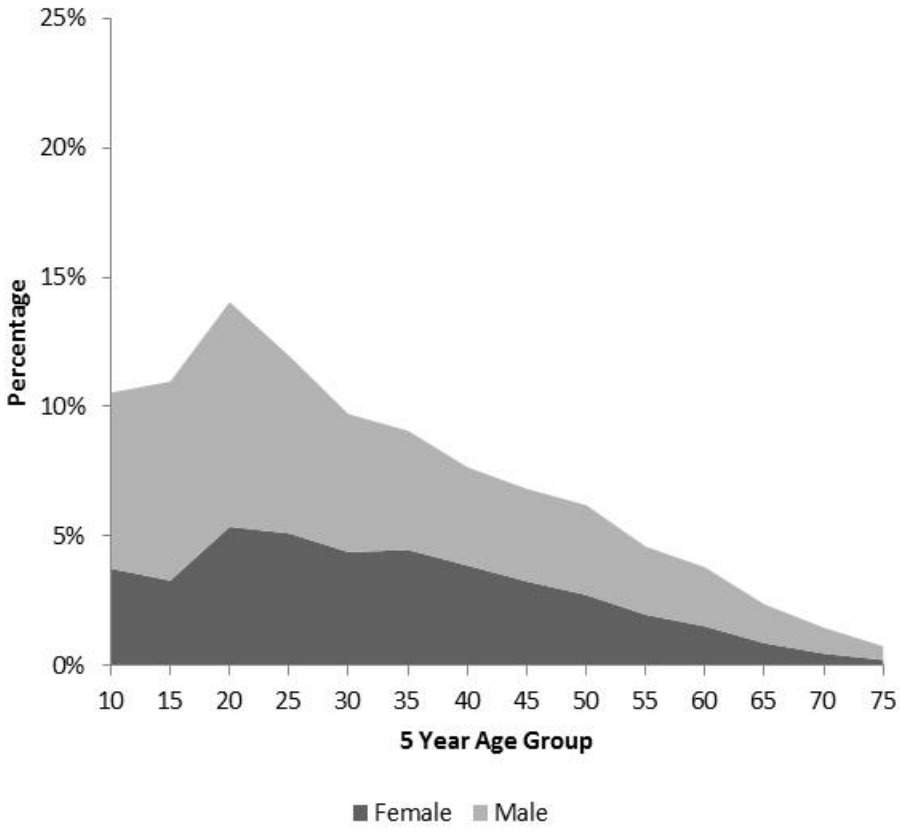


Figure 11: Occupation and Non-Occupational Farm Workers, 1900

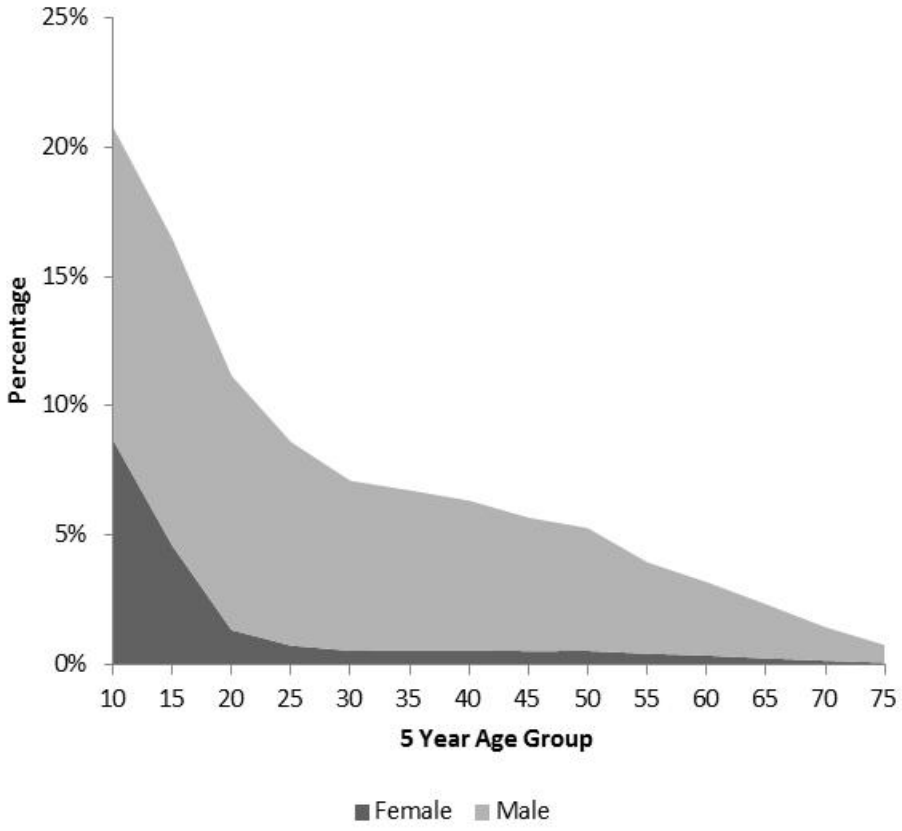


Figure 12: Occupation and Non-Occupational Farm Workers, 1910

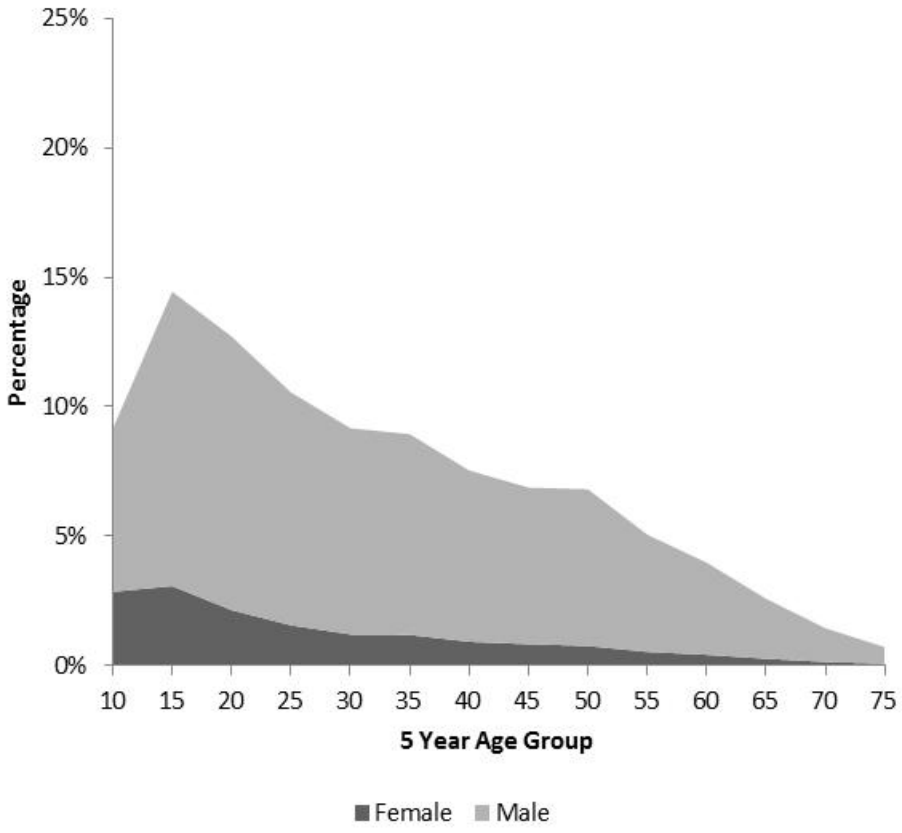


Figure 13: Occupation and Non-Occupational Farm Workers, 1920

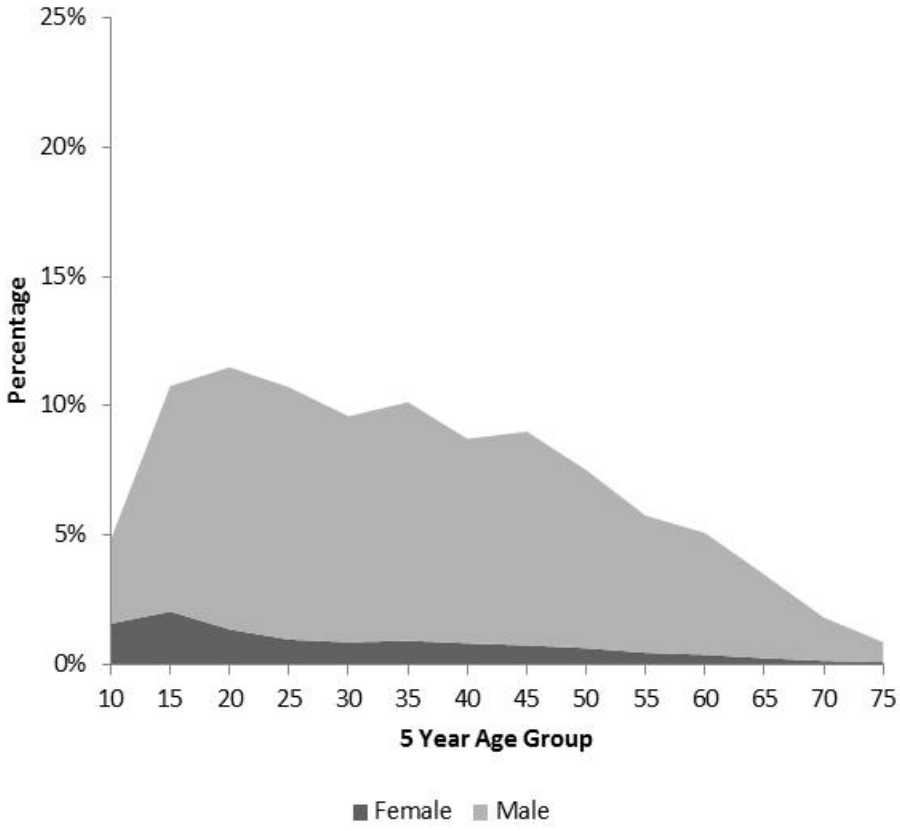


Figure 14: Occupation and Non-Occupational Farm Workers, 1930